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(54) Rotating electrical machine

(57) A rotating electrical machine is proposed which effectively cools a stator and prevents the generation of an eddy current in the stator. A cooling liquid passage (22) extends in a direction parallel with the rotating shaft (2A) of the rotor (2) between an outer peripheral face of the stator cores (4) and an inner peripheral face of the case (1) storing the stator cores (4). The cooling liquid is passed through the cooling liquid passage (22). In this manner, a highly effective cooling results from direct contact of the cooling liquid and the stator cores (4). Furthermore an eddy current is not generated in the stator core (4) as a result of using a cooling liquid having insulating properties.

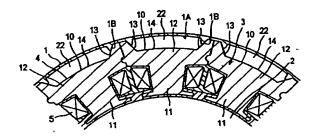




FIG.1

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EUROPEAN SEARCH REPORT

Application Number

EP 01 12 3501

ategory	DOCUMENTS CONSIDE Citation of document with ind of relevant passai	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)	
	US 2 845 551 A (POTT	1,2	H02K1/14H02K1/20	
	29 July 1958 (1958-0 * figures 1,4 * * column 5, line 17	3-6	H02K1/14	
	DE 41 03 154 A (UWE GMBH) 6 August 1992 * claim 1; figure 2 * column 2, line 61	1,2		
,	US 2 247 890 A (REAR 1 July 1941 (1941-07 * page 1, line 39 -	T-01)	3,4	
,	GB 387 961 A (PAUL E 16 February 1933 (19 * figures 4,6 *	HRMANN) 33-02-16)	3,5	
,	EP 0 823 771 A (MATS LTD) 11 February 199 * column 5, line 17	1	TECHNICAL FIELDS SEARCHED (Int.Cl.7)	
١	US 4 764 699 A (NOLE 16 August 1988 (1988 * abstract; figure	3-08-16)	2	H02K
4	US 3 221 195 A (HOFF 30 November 1965 (19 * column 2, line 19	FMANN JACK H) 965-11-30) - line 21; figures :	3-5	
	The present search report has	peen drawn up for all claims		
	Place of search	Date of completion of the sea	roh	Examiner
	THE HAGUE	18 December 2	,	ontreras Sampayo, (
X:pa Y.oa	CATEGORY OF CITED DOCUMENTS inicularly relevant if taken alone inficularly relevant if combined with anotogenent of the same category	T: theory or p E: earlier pat after the fi her D: document L: document	principle underlying to ent document, but p ling date cited in the applicat cited for other reaso	he invention ublished on, or ion

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 01 12 3501

This annex lists the patent tamily members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

18-12-2003

DE 4	2845551 4103154 2247890	A	29-07-1958 06-08-1992	NONE			
US 2		A	06-08-1992				
	2247890		.	DE	4103154	A1	06-08-1992
GB 3		A	01-07-1941	NONE			
	387961	A	16-02-1933	GB	389313	Α	16-03-1933
				BE	388508	Α	30-06-1932
				DE	664532	C	29-08-1938
				DE	644532	С	07-05-1937
				FR	717252	Α	06-01-1932
				GB	387622	Α	09-02-1933
				US	1959527	A	22-05-1934
EP C	0823771	Α	11-02-1998	EP	0823771	A1	11-02-1998
				US	6049153		11-04-2000
		•		CN	1180457	A ,B	29-04-1998
				WO	9731422		28-08-1997
				JP	3417409	B2	16-06-2003
				JP	2002238193	Α	23-08-2002
				JP	2002209353	Α	26-07-2002
				JP	2002199639	Α	12-07-2002
				JP	2002209368	Α	26-07-2002
				บร	6300700	81	09-10-2001
				US	6369480	B1	09-04-2002
				US	6356001	B1	12-03-2002
				US	2002036438	A1	28-03-2002
				US	2002070619	A1	13-06-2002
JS 4	764699	Α	16-08-1988	EP	0297119	A1	04-01-1989
				JP	1501674	T	08-06-1989
				WO	8804857		30-06-1988
				US	4825531	A	02-05-1989
JS 3	3221195	Α	30-11-1965	GB	965038	Α	29-07-1964

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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